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WIB - WORKING-PARTY ON INSTRUMENT BEHAVIOUR (WERKGROUP VOOR INSTRUMENT BEOORDELING)

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In 1962, five leading Dutch process industries (BPM now Shell, Algemene Kunstzijde Unie now AKZO, DSM, Hoogovens now Corus and Unilever) got together to explore combining tests and sharing the results on process instrumentation. Companies were at the time carrying out these activities individually at very high costs. The five concluded that sharing instrument evaluation reports, even with direct competitors, would be to the benefit of all.
A follow-up meeting held on the 16th December 1963 resulted in the formation of a co-operation panel under the Dutch name "Werkgroup voor Instrument Beoordeling", shortened to WIB.
An independent laboratory, the Institute for Applied Physical Research-TNO, was approached and asked to carry out testing on behalf of WIB. TNO was also made responsible for the administration of the association, supervised by a Board of WIB members.
WIB activities attracted high interest from companies abroad wanting to join and a few years later the official language became English. WIB was translated into "Working-party on Instrument Behaviour". It was officially registered as a non-profit association in 1968.

The early years

WIB membership kept growing and by the end of the sixties, the opportunity arose to separate the daily management of WIB from TNO and employ a professional instrument engineer as manager. The WIB Office was now formed.

Sister Organisations

A similar co-operation of process industries had been established in England since 1962 under the name of SIREP, now Evaluation International. Both WIB and SIREP had the same objectives and over the years several agreements were reached. In 1975 they started to exchange reports, in a standard report format, to each other's members. Towards the end of the seventies WIB and SIREP were approached by EXERA who had set up themselves as an evaluation group in France. EXERA reporting was in French and it was not until 1982 when they started publishing in both French and English that they could enter into a report exchange agreement. SWE, the International Instrument User's Association was formed. The benefits of membership were tripled.

Working Parties

In the early eighties WIB formed groups called working parties. Experts from member companies were asked to address the development of specific projects, formulate test programmes and give their opinion on results. These groups were to become the backbone of WIB. Experienced process control specialists and instrument engineers participated in separate groups dealing with flow instruments, process analysers and process control systems according to their area of expertise. The working parties would increase and change over time with many new fields added. Today under the umbrella of working parties there are numerous expert groups and task forces that deal with specific areas: from diagnostics, level measurements, functional safety and so on. The benefits for members from the input of these experts are obvious. Moreover another kind of benefit emerged, difficult to quantify but of tremendous value: The exchange of information among members. In the working groups sensitive information on direct experience, problems and solutions is freely discussed in an informal setting, for the benefit of all participants.

Development and Changes in the Process Industry

Since the fifties the process industry had grown rapidly in size and complexity and with it the demand for better and more reliable instrumentation. Instrument manufacturers were under pressure to improve and develop new instruments. Many instruments were released too early on

the market with disappointing results. Many did not meet their specifications, were unreliable, required high maintenance and often affected the integrity of a plant since they formed part of safeguarding systems. It was out of this situation that WIB had been created. WIB was to provide reliable data on specific instruments. The production of new instruments continued to increase during the seventies and, especially during the eighties the emergence of new technologies saw the production of ever more sophisticated instrumentation. This continued during the nineties to today with the appearance of "The Smart/Intelligent Instruments". In the early nineties the economic recession had an impact on process industries that would change the way companies would deal with instrumentation. Economic recession directed attention of management towards the cost of maintaining production facilities and process automation. The cost for instrumentation in relation to the total plant costs had risen considerably over the years. A turn was made towards the purchase of equipment based on the total cost of ownership, taking into consideration all costs from acquisition to installation, operation and maintenance. Also the "back to core business" trend led to cutting down the engineering departments and tasks. The instrument expertise decreased within companies accordingly, yet the complexity of instruments continued to increase. The nineties saw the increase of out-sourced engineering projects to Engineering Contractors who also became more and more responsible for the selection and maintenance of instrumentation or the total cost of ownership. WIB opened its membership to include Engineering Contractors, so that through WIB they are aided in building cost-effective plants with reliable and safe process control instruments. This benefits our members and the process industry at large.

WIB's new role

By the late nineties WIB started publishing reports on CD-ROMs. Formerly members received one hard copy of every new report. The CD-Rom production meant that members could now print as many copies as desired, also download the CD-Roms on their Intranet systems and people from their company all over the world had access to WIB reports immediately. The CD-Roms became cumulative, i.e., all new reports published in a six months period were included. The CD-Rom production was a transitional phase for a whole new way of interacting with members. The WIB management has worked hard to implement a new way of distributing reports and more. WIB's web-site has been developed further to include a secure members-only area: the WIB-Forum. All the WIB-SWE reports, minutes of meetings, and additional data are located in different workspaces. Information is up-dated immediately and members are notified automatically when new reports are released or other relevant information is made available. In line with the changes in the industry and new requirements of members, WIB has shifted from the particular evaluation report of an instrument or system to the production of more comparative reports, selection guidelines, desk studies, and market studies.

The process of change in the industry is continuing. For example, we are now experiencing the fading of clear-cut lines among the different players: the merging of the once separate entities such as Manufacturers/Suppliers/Eng Contractors. As ongoing changes occur in the industry, WIB will be right in there observing, adapting and evolving for the benefit of its members.

Overview and highlights of flow measurement related activities

Over the past years a substantial portion of WIB's activities have been in the field of flow measurement. A notable trend is the shift in emphasis from pure lab-evaluation work towards more elementary study type of activities, with the aim of producing reliable selection- and application guidance for the end user.
Highlights of a number of studies and evaluations in the subject of flow measurement, performed by WIB over the past 2-3- years are:

a) Evaluation campaign Vortex meters

This was performed over '99 to '01, resulting in Vortex meter performance reports of different makes and types, but also in an application guide for Vortex flow meters, and studies on erosion effects on the Vortex bluff bodies and comparison with similar levels of erosion in orifice plates.

A further investigation was performed, together with TNO-TPD on the effects of pipe vibrations (in different planes) on the performance of Vortex meters and improvements brought about by applying advanced signal processing capability.

b) Flare measurement :

In this project a novel insertion type ultra-sonic flow meter was tested.

c) Straight tube Coriolis meters:

A straight tube Coriolis meter was evaluated. A follow-on campagn of a number of latest generation Coriolis meters is currently planned as follow-up of this project.

d) Diagnostics requirements studies

WIB and NAMUR committees worked together to specify and state minimum requirements for diagnostics requirements for field instrumentation, including flow devices. Position notes and requirements specs are expected to be published shortly to open an extensive dialogue stage with the supplying industries.

e) Evaluation of cost saving flow meter solutions

Comparison testing of 2-wire vs. 4 wire executions of EMF meters were successfully performed; draft reports are meanwhile made available internally.

f) *Application and selection of flowmeters*

It is very clear that selection of flowmeters should be based on required and delivered performance, rather than technology and cost only. Guidance on application and expected performance is freely exchanged in the flow-experts group, to which all WIB members are entitled to send their representatives;

In this context, further studies and tests currently ongoing, or planned to be undertaken are:

- Flow disturbance influences on different meter types
- Time response behaviour of different meter types
- Application studies and member guidance on U/S metering in gas and liquids.

WIB is continuing to provide Instrumentation expertise services to its members. We can make certain reports also available to non-members. A full index of all reports issued since inception of our organisation is made available on our Forum site, (also accessible for ‘guests’) via our web site: www.wib.nl